

Supplemental Table 1: *XRCC1* SNP description, genotypic frequencies, and association with ALS – New England ALS Study*

| SNP | Position | Alleles (major/minor) | Genotypic frequencies | | | | | | OR (95% CI)† |
|-----------|----------|--------------------------|-----------------------|------|------|----------|------|------|---------------|
| | | | Cases | | | Controls | | | |
| | | | XX | Xy | yy | XX | Xy | yy | |
| rs25487 | 48747566 | G/A | 0.46 | 0.38 | 0.16 | 0.26 | 0.53 | 0.21 | 0.4 (0.2-1.0) |
| rs25489 | 48748252 | G/A | 0.91 | 0.09 | 0 | 0.95 | 0.05 | 0 | 2.0 (0.4-20) |
| rs915927 | 48749067 | A/G | 0.31 | 0.47 | 0.20 | 0.44 | 0.46 | 0.10 | 1.7 (0.7-3.8) |
| rs1799782 | 48749414 | C/T | 0.88 | 0.12 | 0 | 0.95 | 0.05 | 0 | 2.4 (0.5-22) |
| rs939461 | 48760415 | A/C | 0.87 | 0.13 | 0 | 0.69 | 0.31 | 0 | 0.4 (0.1-0.9) |

* X denotes major allele, y denotes minor allele.

† OR, odds ratio comparing carriers of the minor allele (Xy and yy) to subjects homozygous for the major allele (XX); CI, confidence interval.

Supplemental Table 2: *XRCC1* SNP description, genotypic frequencies, and association with ALS - GWAS

| SNP | Position | Alleles (major/minor) | Irish GWAS | | | | | | | NINDS GWAS | | | | | | |
|-----------|----------|--------------------------|-----------------------|------|------|----------|------|------|--------------------------|-----------------------|------|------|----------|------|------|---------------|
| | | | Genotypic frequencies | | | | | | OR (95% CI) [†] | Genotypic frequencies | | | | | | |
| | | | Cases | | | Controls | | | | Cases | | | Controls | | | |
| XX | Xy | yy | XX | Xy | yy | XX | Xy | yy | XX | Xy | yy | XX | Xy | yy | | |
| rs1799778 | 48750981 | G/T | 0.41 | 0.46 | 0.13 | 0.44 | 0.44 | 0.12 | 1.1 (0.8-1.6) | 0.42 | 0.43 | 0.15 | 0.40 | 0.46 | 0.14 | 0.9 (0.6-1.3) |
| rs2854501 | 48751841 | C/T | 0.63 | 0.30 | 0.07 | 0.61 | 0.32 | 0.07 | 0.9 (0.6-1.3) | 0.67 | 0.32 | 0.01 | 0.64 | 0.30 | 0.06 | 0.8 (0.6-1.2) |
| rs3213403 | 48758568 | A/G | 0.93 | 0.07 | 0 | 0.90 | 0.10 | 0 | 0.7 (0.4-1.4) | 0.88 | 0.12 | 0 | 0.89 | 0.10 | 0.01 | 1.1 (0.6-1.8) |
| rs2854496 | 48760033 | G/A | 0.61 | 0.36 | 0.03 | 0.57 | 0.39 | 0.04 | 0.8 (0.6-1.2) | 0.65 | 0.31 | 0.04 | 0.65 | 0.31 | 0.04 | 1.0 (0.7-1.4) |
| rs939461 | 48760415 | A/C | 0.78 | 0.22 | 0 | 0.78 | 0.21 | 0.01 | 1.0 (0.6-1.6) | 0.77 | 0.22 | 0.01 | 0.85 | 0.15 | 0 | 1.6 (1.0-2.5) |
| rs3213287 | 48763248 | A/G | 0.91 | 0.09 | 0 | 0.95 | 0.05 | 0 | 1.7 (0.8-3.7) | 0.89 | 0.11 | 0 | 0.92 | 0.08 | 0 | 1.4 (0.8-2.4) |
| rs3213255 | 48769347 | T/C | 0.36 | 0.45 | 0.19 | 0.32 | 0.48 | 0.20 | 0.8 (0.6-1.2) | 0.42 | 0.43 | 0.15 | 0.37 | 0.44 | 0.19 | 0.8 (0.6-1.2) |
| rs2682585 | 48773128 | C/T | 0.67 | 0.27 | 0.05 | 0.64 | 0.29 | 0.05 | 0.9 (0.6-1.4) | 0.69 | 0.29 | 0.02 | 0.68 | 0.26 | 0.06 | 0.9 (0.6-1.4) |
| rs2682587 | 48774269 | C/A | 0.61 | 0.35 | 0.04 | 0.58 | 0.38 | 0.04 | 0.9 (0.6-1.3) | 0.65 | 0.31 | 0.04 | 0.63 | 0.33 | 0.04 | 0.9 (0.6-1.3) |
| rs184239 | 48775995 | T/C | 0.66 | 0.28 | 0.06 | 0.65 | 0.31 | 0.04 | 0.9 (0.6-1.4) | 0.70 | 0.29 | 0.01 | 0.68 | 0.26 | 0.06 | 0.9 (0.6-1.3) |

* X denotes major allele and y denotes minor allele; some frequencies do not round up to 100% due to missing or rounding.

† OR, odds ratio comparing carriers of the minor allele (Xy and yy) to subjects homozygous for the major allele (XX); CI, confidence interval.